

- correction of the image of the damage density disturbed in process of the said modification so that the gray shades corresponding to the previous damage density of the internal areas are reconstructed.

Claim 19 (New): The method in accordance with claim 18 wherein the density of internal structure is associated with gray shades so that visual effect produced by the damage density is identical to the said gray shades.

Claim 20 (New): The method in accordance with claim 18 wherein the correction of visual effect, produced as a result of modification of damage density, is created by corresponding correction of gray shades.

Claim 21 (New): The method in accordance with claim 20 wherein the correction of gray shades is produced by changing brightness of separate damages.

Claim 22 (New): The method for creation of an arrangement of laser-induced damages, which provide the production of visible internal structure, comprising:

- transformation of an internal structure of an image into an aggregate of several images enclosed in each other;
- transformation of all the said images into multi-surface arrangement of laser-induced damages so that their density correlates with density of internal structure;
- formation of gray shades of the said images so that they correspond to the internal density of damages and so that all internal images are visible through outer images.

Claim 23 (New): The method in accordance with claim 22 wherein the correspondence of gray shades to the internal density is provided by special formation of multi-surface arrangement of damages.

Claim 24 (New): The method for visualization of internal structure of tomography images, comprising:

- transformation of every 2D image, reconstructed in the tomography process, into a point arrangement;
- combination of all said point arrangements into 3D multi-layer point arrangement so that density of the points correlates with the density of the internal tomography image;
- modification of the said 3D multi-layer point arrangement so that the gray shades of the created internal structure reconstruct the image of the internal structure.

Claim 25 (New): The method in accordance with claim 24 wherein visualization of internal tomography structure is improved by moving away of the damages shaded the internal damages along the direction which is perpendicular to the axis Z.

Claim 26 (New): The method in accordance with claim 24 wherein the number of the layers of the said multi-layer point arrangement is determined by the value of the normalization parameter used in the tomography reconstruction process.

Claim 27 (New): The method in accordance with claim 24 wherein distances between adjacent layers are correlated with the value of the normalization parameter and do not increase the minimal critical value characteristic for the used transparent material.

Please, add Figures 1-3 and the description of the drawing. They illustrate laser-induced images with internal structures and facilitate understanding of the invention. They show the result of using methods disclosed in the present invention and specified in the claims.

Remarks

The present invention is based on the unique property of laser-induced damage images produced inside transparent materials: it is possible to produce an image with its internal structure so that the structure is visible. This property was not used in any patents disclosing methods and system for production of laser-induced images. No patents or